# "Future of Nutrition" Workshop (Day 1)

**iNUTRI 2025**

2-3 July, Rowett Institute,

University of Aberdeen

1. **Reflection** (1 min, individually)

**"What tools, models, or data sources outside nutrition could radically transform how we understand food, health, and nutrition of animals and humans by 2030?"**

*Drawing from your expertise, what do you think will be the next breakthrough and why?*

2. **Speed mapping** (4 min, group)

On a paper or a laptop, create a 'expertise table' where you write:

**Group members**
**Research interests in the group**
**Tools you use (e.g., AI models, clinical trials, lab experiments)**

3. **Idea generator** (25 min)

Discuss with your group:

- How the tools we (our group) use have been applied and have changed how we tackle nutrition challenges?
- What would nutrition research look like if AI were your main tool?
- How might information from non-model organisms (e.g., ecological research) influence dietary recommendations in humans?
- What's a nutrition problem that seems unsolvable – but might not be with new tools?
- What questions are not being asked, but should be?
- Where will the next big breakthrough in animal/human nutrition come from?

Record 1-3 best future-front ideas on post-its or cards. See *'Ideas for inspiration*' to kickstart discussion, but don't limit yourselves to those!

4. **Wrap-Up** (5 min)

Place your groups' ideas on a table, walk around, and see what the other groups did.

# "Future of Nutrition" Workshop (Day 2)

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5. **Idea gallery** (5 min, individually)

Revisit the ideas from yesterday's workshop

Vote on the ideas you find most compelling, disruptive, or actionable (e.g., plate your vote with stickers).

6. **Incubator** (20 min, group)

Join new groups/tables and let's focus on the 3–5 top-voted ideas. Select **one** and work together to flesh out a **Future Project Brief**, including:

- Idea title
- The problem it addresses
- Why now?
- Technologies/fields involved or needed and why
- Key challenges to its realisation
- What a pilot project/experiment/dataset/algorithm could look like

Write them in a word document as your co-create. We will record your ideas for future inspirations. Don't forget to write your full names, so we can contact your later as ideas might develop.

7. **Share and Reflect** (10 min)

Elect a speaker for the group. The person will give the group a 1 or 2-minute pitch of their project. The ideas will be recorded

8. **Wrap-Up** (5 min)

Reflections of what emerged and future directions.

## Ideas for inspiration

- **AI predicting wild animal nutrient intake**

  How might machine learning models predict the diets of wildlife to inform conservation or human nutrition strategies?
- **Gut microbiome + graph networks**

  Using network science to map gut microbial interactions and link them to nutrition interventions.
- **Wearable biosensors for micronutrients**

  Imagine real-time tracking of iron, zinc, or vitamin D status via a wearable device.
- **Satellite imagery + food security**

  Applying Earth observation data to monitor crop yields and nutrient availability in real time.
- **Digital twins for human metabolism**

  Creating virtual models of an individual's metabolic system to test dietary changes safely before applying them in real life.
- **Blockchain for food traceability**

  Securely tracking nutritional quality from farm to fork.
- **Ecological models to predict foraging patterns**

  Borrowing models from animal behavior studies to understand human food choices in different cultural environments.
- **Psychological nudging + personalization**

  Combining behavioral science with personalized algorithms to encourage healthy eating.
- **AI-driven recipe generation**

  Automatically creating nutritionally balanced, culturally relevant recipes from available ingredients.
- **Crowdsourced nutrition interventions**

  Engaging communities through participatory science to develop more locally adapted solutions.